

Approved Minutes of the Technical Advisory Committee Meeting
May 20, 2008

Members present: Roger Thompson Steve Revell
Rodney Pingree Gail Center
Jeffrey Williams

Others present: John Beauchamp Anne Whiteley
Scott Stewart Gary Schultz
Claude Chevalier Chris Thompson

Scheduled meetings:

June 27, 2008 12:30 – 3:30 PM Chapel Conference Room

Review of minutes

The draft minutes for the April 15, 2008 meeting were accepted as drafted.

Water Treatment Systems

Anne suggested working from the draft checklist that Roger had prepared. The group confirmed that there is continued consensus for deregulation of water treatment systems that are designed for, and which in practice, only treat for hardness and/or for secondary contaminants. Anne then asked that the section related to treatment systems for pathogens for water systems serving other than one single family residence on its own lot be considered. Questions 10 and 11, related to whether or not the aquifer is contaminated and whether it can be remediated were discussed. The checklist is included below as an attachment. It was decided to revise the questions to focus more on the source of the contamination.

It was agreed that a finished checklist needs an introductory statement that explains the purpose and use of the checklist. Anne will do a first draft of this statement.

The use of WQA (Water Quality Association) Certifications was discussed. The level 1 certification covers a basic understanding of water treatment issues for some types of simple treatment systems. It is possible to obtain additional levels of certification up to level 6. It appears that a combination of level 1 and certification for disinfection would be sufficient for a person designing systems for pathogen treatment.

Water treatment system designers

There was a discussion of what qualifications should be required to design pathogen treatment systems for water supplies serving other than one single family residence on its own lot. There was consensus that registered professional engineers should be acceptable under the Wastewater System and Potable Water Supply Rules. The P.E. Board also has jurisdiction and could limit these designs to only engineers with a particular specialty license. There was consensus that Class B Designers who also hold WQA level 1 certification and certification for disinfection systems could design treatment systems for treatment of pathogens. The licensed well drillers suggested that their well driller license alone should be sufficient though they would support adding an hour or two of continuing education to their training courses. In addition, any person holding a WQA level 1 certification and certification for disinfection systems could design treatment systems for treatment of pathogens.

Equipment certifications

The question of whether the treatment equipment should be certified was discussed. John noted that NSF (National Sanitation Foundation) certifications are very specific and very expensive. Each company has several models of systems and each would have to be separately certified. NSF, and other agencies, also certify individual fittings, valves, pumps, and other items that make up a complete system. It was decided to not recommend a requirement that equipment be NSF certified.

Pathogen treatment for systems serving more than one SFR

The issue of regulation of treatment systems for pathogen treatment of water systems serving only one SFR (single family residence) on its own lot was also discussed. Rodney asked why the requirements for an SFR should be different than for other water systems. Gary suggested that the individual owner should be able to decide what treatment system to use as only the owner's family is exposed to the risk. Jeff agreed with Rodney concerns. Gail and Claude supported the concept that the homeowner should be able to decide. Jeff noted that the issue of whether the installed treatment system was appropriate could also be part of the discussion at the time of sale and the new owner could upgrade if there were any concerns. The attendees voted with 8 in favor of deregulation, 1 in favor of regulation, and 2 abstaining.

Treatment for primary standards

Treatment for primary standards was also discussed. The list proposed for people allowed to design these systems was the same as noted above for pathogens with the addition that those using WQA certification would need the specific certification related to the technology proposed for use. An example is that there is a specific certification for use of reverse osmosis treatment systems. The attendees voted with 7 in favor of deregulating these systems for SFRs while all opposed deregulating systems that served anything other than only one single family residence on its own lot.

Information and outreach

The group recommended that a list of types of treatment systems and related information be created. There is a lot of potential for a good public information document/outreach program that would inform people installing treatment systems that are not regulated.

Items prioritized for discussion with high, low, and medium ranking

1. Soil identification vs. perc test **medium**
2. Curtain drain with presumption of effectiveness **high**
3. Revisions to desktop hydro chart **medium**
4. Minimum amount of sand under a mound **high**
5. Grandfathered design flow and conversion of use policy **high**
6. Updating of design flow chart **high**

Executive Committee

John Forcier, Steve Revell, Lance Phelps, Phil Dechert, and Roger Thompson
Alternates – Chris Thompson, Bernie Chenette, Spencer Harris, Jeff Williams

Subcommittees

Hydrogeology - Allison Lowry, Craig Heindel, Dave Cotton and Steve Revell.

Training subcommittee - John Forcier, Roger Thompson, Allison Lowry, Dave Cotton, and Barbara Willis.

Drip Disposal – Roger Thompson, Dave Cotton, Steve Revell, Alan Huizenga

Water treatment systems – Gail Center, Jeff Williams, Rodney Pingree, Dave Cotton, Lance Phelps, and Roger Thompson.

Attachment

Checklist for Water System Evaluation 4-18-2008 **DRAFT Revised 5-20-2008**

This checklist is the basis for determining that the project described below qualifies for exemption from the Wastewater System and Potable Water Supply Rules as stated in 1-304(a)(???) related to treatment for protection against pathogenic organisms. Any water treatment system must be of the point of entry type so that all portions of the interior water distribution system receive treated water.

This form must be completed, signed and dated, and filed in the municipal land records where the property is located. Installation of a water treatment system without first completing all 3 steps means the project is in violation of the Rules.

Landowner's name _____
Property location (not mailing address) _____

Permit # for any existing state permit for subdivision, water supply, or wastewater disposal system _____

Note: Use of this form does not supersede any requirements in an existing permit.

Site Evaluation:

1. Source type: _____
2. Comments based on visual inspection of well construction:

3. Well Tag ID# if the well is tagged. _____
4. Are there obvious risk factors? _____
5. Are there any known sewer lines or septic tanks within 50' of the well casing?
Are there any known leachfields with 100' of the casing. If yes, are these a likely
source of the contamination? _____

Distribution System:

6. Atmospheric storage tanks: Are there any atmospheric storage tanks? Interior or exterior? Is the tank properly covered and sealed against contamination? Is there an air gap between the tank and the supply pipe?

7. Pressure tanks: Is the tank operating properly? _____
8. Distribution piping: Are there dead ends? Cross connections? _____

Water quality evaluation:

9. Constituents tested for and the concentrations: _____

System evaluation

10. Is it your opinion that the aquifer itself is contaminated? _____
11. If yes, are there actions that can be taken to remediate the aquifer? _____
12. Is a different water source an option? _____
13. Are there problems with the water distribution system and/or storage system either inside or outside of the building that should be corrected? _____
14. Is water treatment an option? _____
15. What are the controlling contaminants and what equipment is recommended as part of the water treatment system? _____
16. What is the estimated amount and frequency of backwash discharge? _____
17. If the discharge will be directed to the existing soil-based wastewater disposal system, will the treatment system have any adverse effects on the system, i.e. backwash discharge volume and/or constituents? _____
18. If the discharge will not be directed to the existing wastewater disposal system it will require a permit under the Underground Injection Control Program. State the UIC permit # _____
19. What is the estimated cost to install and operate a water treatment system based on a 20 year life cycle in comparison to a replacement or upgraded source?

Treatment _____

Replace or upgrade source _____

Certification of the person preparing the design for the water treatment system.

I hereby certify that in the exercise of my reasonable professional judgment the design-related information stated above or included with this form is true and correct, and that the design included with this form for an exemption complies with the Vermont Wastewater System and Potable Water Supply Rules and the Vermont Water Supply Rules.

Name _____

Address _____

Professional Engineer license # _____, or Class B Designer # _____
or WQA certification # _____

Instructions for completion of the form

1. Source type: drilled well into bedrock, drilled well in unconsolidated material, dug well, spring, concrete well tiles in brook, pipe into lake, etc. Specify depth and yield if known.
2. Visual inspection of well: Is the well properly covered? Does surface water pond around the well casing? Does the well casing (metal, concrete, stone) allow surface water to enter the casing?
3. Risk factors: Animals tethered or fenced near the well casing. Piles of manure or other materials nearby that might contaminate the well. For primary standards are there nearby users of a particular contaminant that might be the source?
4. Isolation distances to sewer lines, septic tanks, leachfields. Measure from the location based on the best available information. Excavation of sewer lines, septic tanks, and leachfields is not routinely required.